CNC-110STD

C-120 User's manual

(DOC NO:050523)

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1. INTRODUCTION

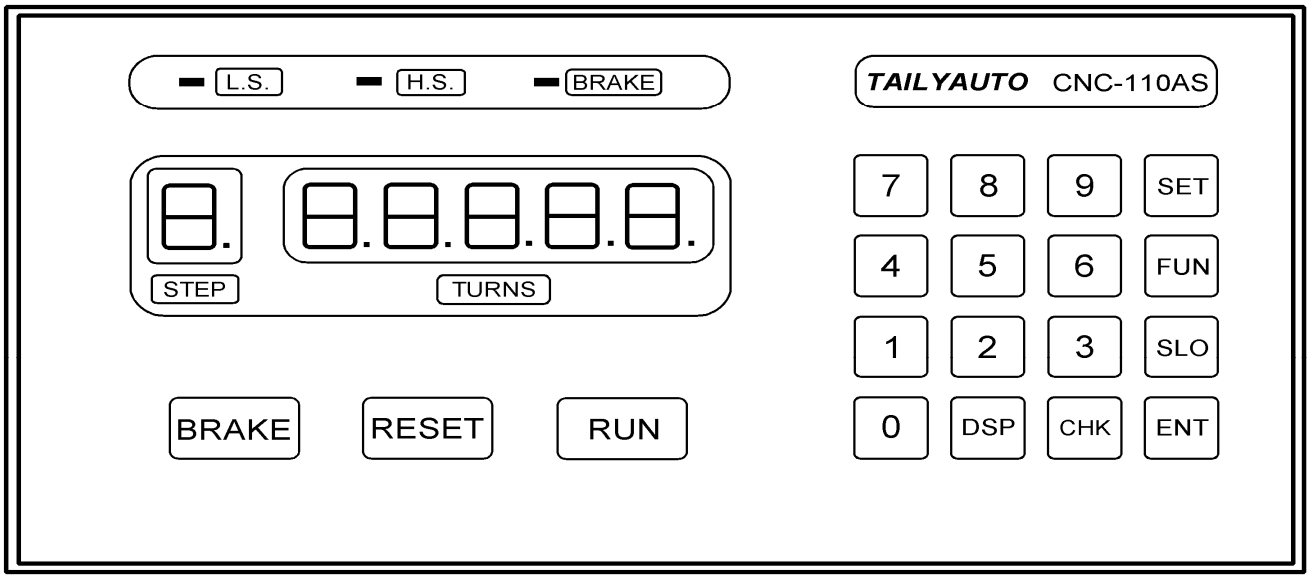
CNC-110STD synchronous spreading controller, CNC-110STD IS an integrated design device, putting micro controller, step motor diver and power supply circuits into one control box, simultaneously achieving size reduction, high performance and low cost.

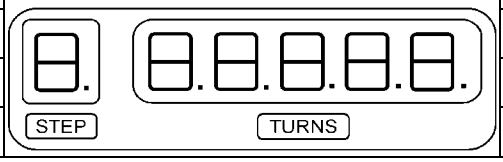
C120 program edition is design for synchronous spreading device, to spread wire, cable, yarn, and coil.

2. Features

- ◆ Microprocessor design, easy for program-setting handling.
- ◆ Non-battery design, using EEPROM for saving memory and can retain it for 10 years.
- ◆ Build-in step motor drive circuit for guiding traverse, direct to drive two phases 2.0A step motor.
- ◆ With power failure protect function, can continue the unfinished work after power restored.
- ◆ Power source AC100V~AC240V 100w MAX. 50/60Hz.

3. FRONT PANEL



Key pad	Display	Indicator
0 ~ 9 ：Entering numerical values.	**STEP** ：Item display.	**L.S.**：No function.
SET ： parameter setting.	**TURNS**：Data display.	**H.S.**：No function.
FUN ：Function select .		**BRAKE** ：No function.
ENT ：Enter.		
RESET ：Reset.		

4. Spreading parameter setting

The CNC-110STD with three items of spreading parameter：

[1]：Shift；To set the start spreading position for guiding traverse.

Setting range ：[000.00~999.99]mm。

[2]：Width；To set the separating region of guiding traverse [000.00~999.99]mm。

Setting range：[000.00~999.99]mm。

[3]：Pitch；To set the separating clearance between turns.

Setting range [0.000~99.999]mm.

In ready mode, press SET to set the spreading parameters.

The item display shows [1], and the data display shows Starting position setting value [xxx.xx], press numerical keys to change the value, then press ENT to next item, follows this procedure to finish all three items parameter set, then press SET again, back to the ready mode.

For example：

Shift =10.30mm、Width =120.50mm、Pitch=35.500mm

The setting procedure as follow：

SET 1 0 3 0 ENT 1 2 0 5 0 ENT 3 5 5 0 0 ENT SET RESET。

5. Spreading operation

After power on, the CNC-110STD controller will automatically get into ready mode, in this mode when spindle is rotating, the counting sensor will send the spreading signal to the controller, and the guiding traverse will according to the setting value to spreading automatically.

※If the spindle is rotating in opposite direction, the guiding traverse will not move and the display gleam warning.

Each time, after finish a products spreading, have to do reset process once and then to spreading for a new product.

◆ Reset process

Press RESET or the reset input signal (on the back panel CN1 connector) is low lever, the guiding traverse will move to the home position to do the position corrective action, and then move to the starting position.

◆ Position display

During spreading, the data display will shows the actually position of the guiding traverse, the positions value is use the home position as the basis.。

◆ Position compensates

In ready mode, press 1 to compulsive moving the guiding traverse homeward, and press 2 to compulsive moving the guiding traverse in opposite direction, the position compensates action will not changed the actually position display value.

6. Configuration setting

6.1. Moving increment

In ready mode, press FUN 0 to set the guiding traverse moving increment, the item display shows [F], and data display shows [0 x.xx], press numerical keys to change the value, then press ENT to finish setting, setting range [0.00~9.99]

◆ How to calculate the guiding traverse moving increment

Moving increment＝(Screw pitch ﾒ Gear ratio ÷ 4)

Example： Screw pitch＝5mm、Gear ratio=1.6(step motor side ÷ screw side)

Moving increment＝5 ×1.6 ÷ 4 ＝ 2.00

Reference table							
Screw pitch	Gear ratio (step motor side/screw side)						
	0.8/1	1/1	1.6/1	2/1	3.2/1	4/1	8/1
2.00mm	0.40	0.50	0.80	1.00	1.60	2.00	4.00
4.00mm	0.80	1.00	1.60	2.00	3.20	4.00	8.00
5.00mm	1.00	1.25	2.00	2.50	4.00	5.00	
8.00mm	1.60	2.00	3.20	4.00	6.40	8.00	
10.00mm	2.00	2.50	4.00	5.00	8.00		
16.00mm	3.20	4.00	6.40	8.00			

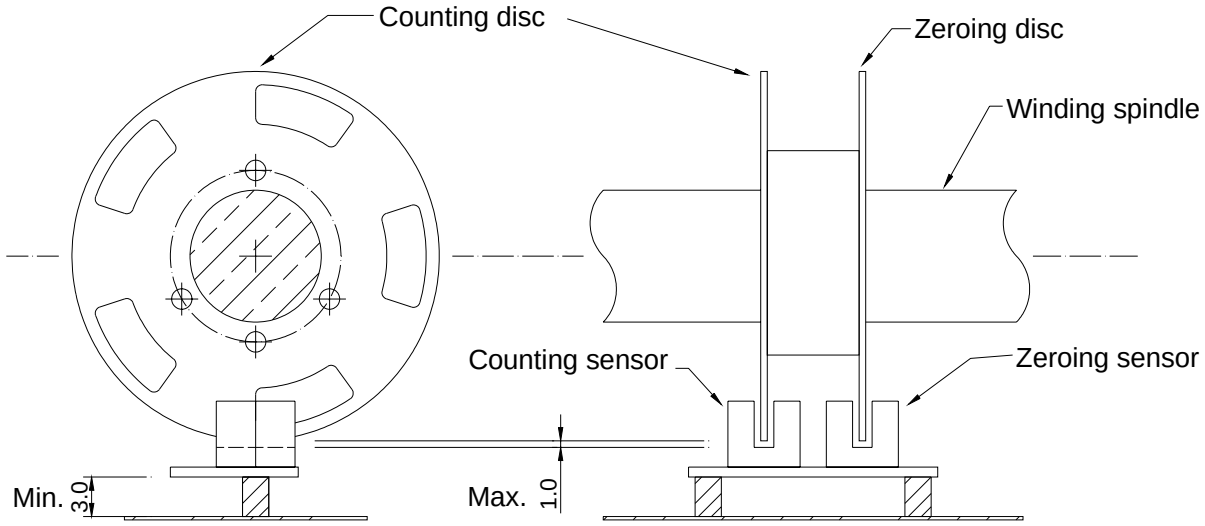
6.2. Moving speed

To set the moving speed for the guiding traverses moving to home position and starting position. In ready mode, press FUN 1 to set the moving speed, the item display shows [F], and data display shows [1 xx], press numerical keys to change the value, then press ENT to finish setting, setting range [00~99], 550PPS~3000PPS.

7. Installation and wiring

7.1. Counting system assembly (unit=mm)

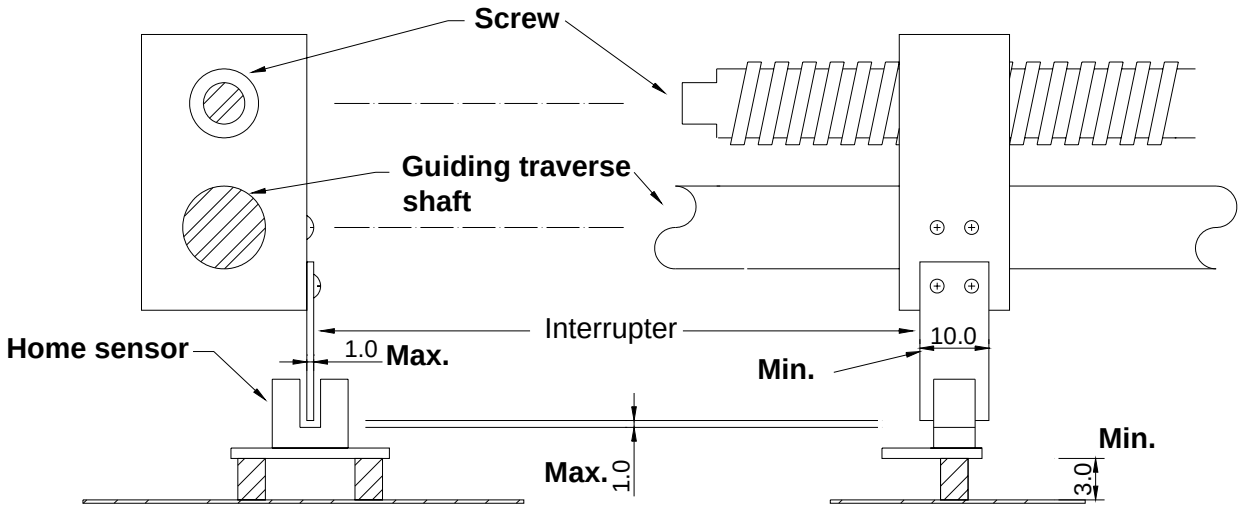
The counting disc and the sensor must assembly as below, otherwise it will count improperly.



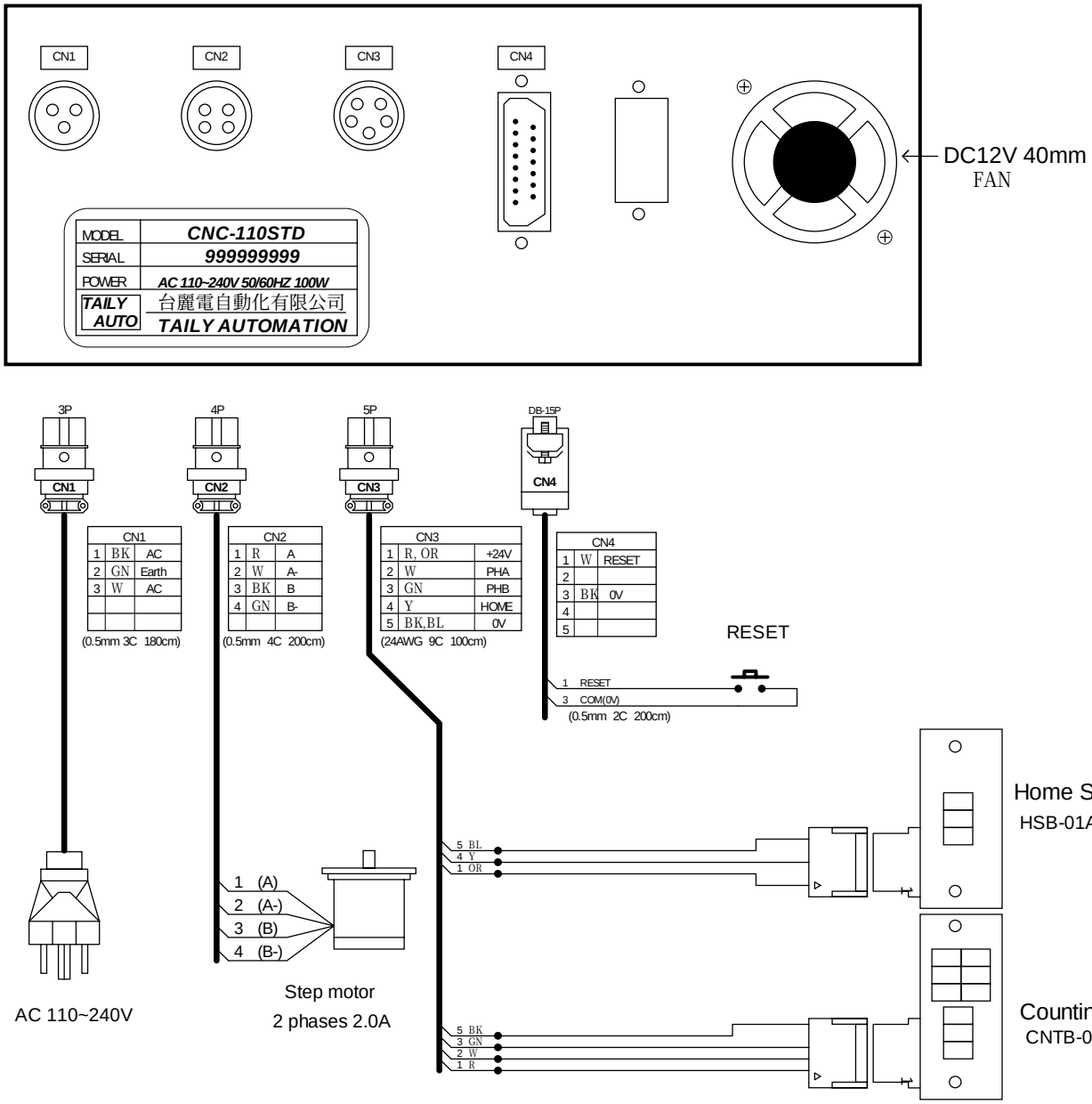
※ The CNC-110STD do not need to use the Zeroing disc.

7.2. Home sensor assembly (unit=mm)

HOME SENSOR must be assembly as below, otherwise a fault may occur.



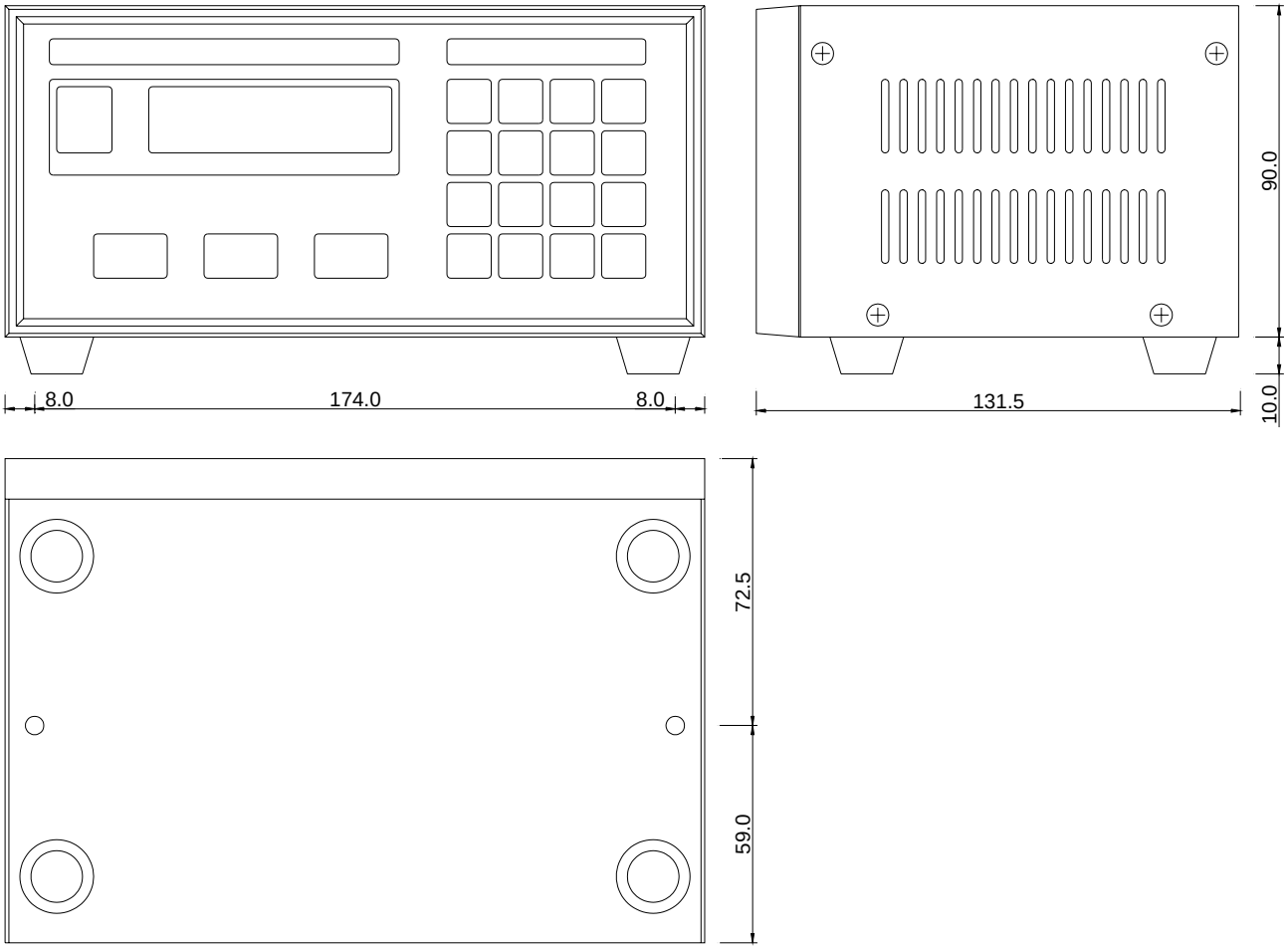
7.3. Wiring diagram



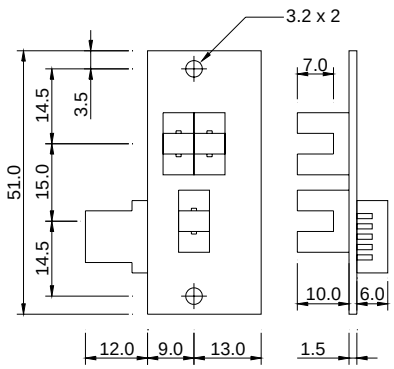
7.4. Accessories

Item	Name	Qty.	
1	CN1 AC power connection cable.	1	
2	CN2 step motor connection cable.	1	
3	CN3 Sensors connection cable.	1	
4	CN4 15P Input signal connection cable.	1	
5	CNTB-03B Counting sensor	1	
6	HSB-01A Home sensor	1	
7	Counting DISC	1	

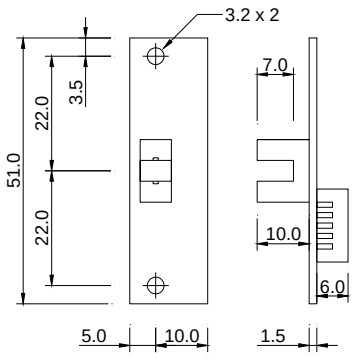
8. Dimensions



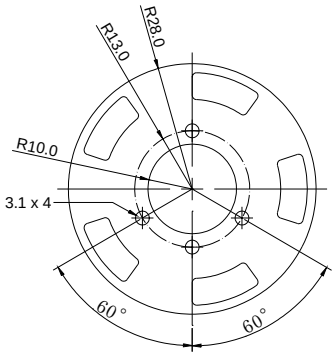
CNC-110STD



CNTB-03B
Counting sensor



HSB-01A
Home sensor



COUNTING DISC